

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated May 20, 2005 has been received and its contents carefully reviewed.

Claims 21 and 23–28 are hereby amended, and claim 22 is canceled. Accordingly, claims 21–31 are currently pending. Reexamination and reconsideration of the pending claims are respectfully requested.

In the Office Action, claims 21–31 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite; claims 21–25 and 28–31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,008,064 to Lee et al. (hereinafter “Lee”) in view of European Patent No. 1005078 to Mikkola et al. (hereinafter “Mikkola”); claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Mikkola, and further in view of U.S. Patent No. 6,024,856 to Haydu et al. (hereinafter “Heydu”); and claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Mikkola, and further in view of U.S. Patent No. 6,403,481 to Matsuda et al. (hereinafter “Matsuda”).

In the Office Action, claims 21–31 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants hereby amend claim 21 to recite “depositing a first metal layer on the first metal seed layer,” and “depositing a second metal layer on the second metal seed layer.” Accordingly, Applicants respectfully submit that the amendment overcomes the rejection of claim 21 and its dependent claims 23–31.

In the Office Action, claims 21–25 and 28–31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Mikkola. Applicants respectfully traverse the rejection and request reconsideration. Claim 21 is allowable over any combination of Lee and Mikkola in that it recites “depositing a first metal layer on the first metal seed layer using an electric plating method,” and “depositing a second metal layer on the second metal seed layer using the electric plating method ... wherein the electric plating method includes the steps of: arranging the substrate in a tub containing an electrolytic solution; removing a metal oxide, wherein removing the metal oxide includes applying a first negative potential to the substrate; providing a deposition solution to the tub having the electrolytic solution; depositing a metal by

applying a negative potential to the substrate, wherein depositing the metal includes applying a second negative potential to the substrate.” Nothing in Lee and Mikkola, alone or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 21, and its dependent claims 23–25 and 28–31, are allowable over any combination of Lee and Mikkola.

In the Office Action, claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Mikkola, and further in view of Haydu. Applicants respectfully traverse the rejection and request reconsideration because Haydu fails to cure the deficiency of Lee and Mikkola to teach or suggest “depositing a first metal layer on the first metal seed layer using an electric plating method,” and “depositing a second metal layer on the second metal seed layer using the electric plating method ... wherein the electric plating method includes the steps of: arranging the substrate in a tub containing an electrolytic solution; removing a metal oxide, wherein removing the metal oxide includes applying a first negative potential to the substrate; providing a deposition solution to the tub having the electrolytic solution; depositing a metal by applying a negative potential to the substrate, wherein depositing the metal includes applying a second negative potential to the substrate.” Accordingly, Applicants respectfully submit that claim 26, as it depends from claim 21, is allowable over any combination of Lee, Mikkola, and Haydu.

In the Office Action, claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Mikkola, and further in view of U.S. Patent No. 6,403,481 to Matsuda. Applicants respectfully traverse the rejection and request reconsideration because Matsuda fails to cure the deficiency of Lee and Mikkola to teach or suggest “depositing a first metal layer on the first metal seed layer using an electric plating method,” and “depositing a second metal layer on the second metal seed layer using the electric plating method ... wherein the electric plating method includes the steps of: arranging the substrate in a tub containing an electrolytic solution; removing a metal oxide, wherein removing the metal oxide includes applying a first negative potential to the substrate; providing a deposition solution to the tub having the electrolytic solution; depositing a metal by applying a negative potential to the substrate, wherein depositing the metal includes applying a second negative potential to the substrate.” Accordingly, Applicants respectfully submit that claim 27, as it depends from claim 21, is allowable over any combination of Lee, Mikkola, and Matsuda.

Response dated August 22, 2005

Response to non-final Office Action dated May 20, 2005

Applicant believes the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to Deposit Account No. 50-0911.

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Respectfully submitted,

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